

CHAPTER 1: THE SCIENCE OF PSYCHOLOGY

WHAT IS PSYCHOLOGY?

- Psychology is the scientific study of behavior and mental processes
- Seek to explain how we perceive, learn, remember, solve problems, communicate, feel and relate to others
- Attempt to understand, measure, and explain the nature of intelligence, motivation, and personality

PSYCHOLOGY AS A SCIENCE

- Rely on the Scientific Method
 - Describe, Understand, Predict and Achieve
- Theory- systematic explanation of a phenomenon; it organizes known facts, allows us to predict new facts, and permits us to exercise a degree of control over the phenomenon
- Hypotheses- Specific, testable predictions derived from a theory

THE GROWTH / HISTORY OF PSYCHOLOGY

THE NEW PSYCHOLOGY: A SCIENCE OF THE MIND

- **Wundt and Titchener: Voluntarism and Structuralism**

- **Wundt**- first lab at University of Leipzig in Germany (1879)
 - Consciousness - focus of study and used **Introspection** - looking inward at color "intensity" and "quality" for example
- **Titchener**- Cornell University
 - **Structuralism** - focused on the structure of consciousness
 - Stressed the **basic units** of experience and the combinations in which they occur

THE NEW PSYCHOLOGY: A SCIENCE OF THE MIND

- **Gestalt Psychology**- studies how humans perceive and experience objects as whole patterns
- **Max Wertheimer** with Kurt Koffka and Wolfgang Kohler
- Said the whole of conscious experience is not the same as the sum of its parts.

THE NEW PSYCHOLOGY: A SCIENCE OF THE MIND

- **Sigmund Freud**

- Theorized that humans are motivated by unconscious instincts and urges that are not available to the rational, conscious mind
- **Psychodynamic theories**- Personality theories contending that behavior results from psychological forces that interact within the individual, often outside conscious awareness

THE NEW PSYCHOLOGY: A SCIENCE OF THE MIND

- **William James: Functionalism**

- Theory of mental life and behavior that is concerned with how an organism uses its perceptual abilities to function in its environment
- Wrote **The Principles of Psychology**
- Looked at Darwin's Theory of Evolution in relation to one's "stream of consciousness" - images, memories, sensations flow and function to help us adapt to our environment
- Founded a laboratory at Harvard University

REDEFINING PSYCHOLOGY: THE STUDY OF BEHAVIOR

- **John B. Watson**

- The whole idea of mental life was superstition; stated that you can not see or define consciousness any more than you can observe a soul
- **Behaviorism**- School of psychology that studies only observable and measurable behavior
- "Little Albert"

REDEFINING PSYCHOLOGY: THE STUDY OF BEHAVIOR

- **B.F. Skinner**

- Behaviorist who added reinforcement to psychology- operant conditioning - rewards and punishment
- Behaviorism dominated psychological research from the 1920's-1960's

MULTIPLE PERSPECTIVES

- Psychologists today tend to see different perspectives as complementary, with each contributing to our understanding of human behavior
- Study interactions between different aspects of psychology & modern research tools allow for more analysis and work never before thought possible

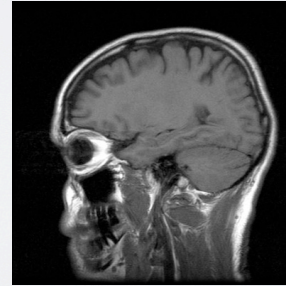
APPROACHES TO PSYCHOLOGY

APPROACHES TO PSYCHOLOGY

- **Biological-** focuses on the physiological bases of thoughts and behavior
- **Behavioral-** the study of observable, measurable behavior
- **Cognitive-** study of mental processes in the broadest sense
- **Humanistic-** emphasizes nonverbal experience and altered states of consciousness as a means of realizing one's full human potential
- **Psychodynamic-** humans are motivated by unconsciousness desires
- **Evolutionary-** Emphasizes the ways in which behavior and mental process are adaptive for survival

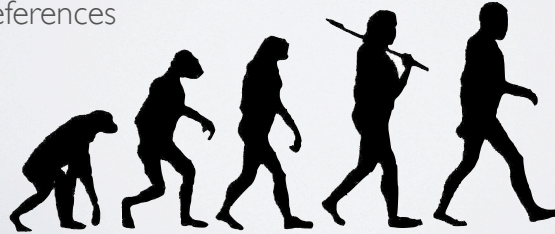
BIOLOGICAL APPROACH

- Focuses on physiological bases of thoughts and behavior
 - Has proven effective in understanding and treating psychological disorders
 - Study the effects of hormones, genes and brain activity
- Techniques for brain study
 - CAT (Computerized Axial Tomography) scans
 - PETs (Positron Emission Computed Tomography)
 - MRIs (Magnetic Resonance Imaging)



EVOLUTIONARY APPROACH

- Theory of evolution is applied to genes (passed to from generation to generation) - related to characteristics and behaviors that are adaptive and are passed on.
- Examples:
 - Cooperation - is adaptive survival strategy.
 - Aggression - form of territory protection
 - Gender Differences - impact mate-selection preferences

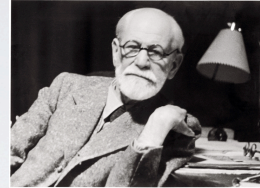


PSYCHODYNAMIC APPROACH

- Emphasis on therapy

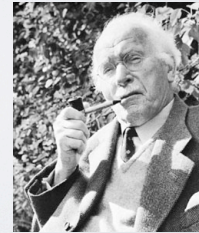
- **Sigmund Freud**

- Most famous psychodynamic psychologist
- Believed that we are motivated by the unconscious mind.
- Adult personalities are created by childhood experiences, specifically crises.
- Emphasized sexuality



- **C.G. Jung**

- Emphasized symbolic, collective nature of the unconscious.



BEHAVIORAL APPROACH

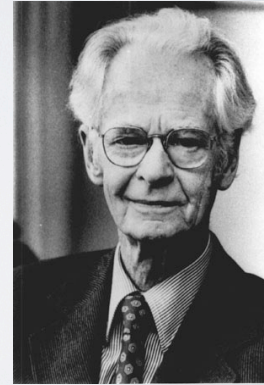
- The study of observable, measurable behavior.
- Biological/genetic makeup and evolution are the “raw material” - all are shaped by **learning**
 - Founded by John B. Watson
 - Based on Ivan Pavlov's **classical conditioning** techniques.
 - Also thought babies were **tabula rasa** (“blank slates”)-; they are molded by experience



BEHAVIORAL APPROACH

- **B.F. Skinner**

- Mind is a “black box”; psychologists should focus on what goes in and what comes out, not what goes on inside.
- Added new element: reinforcement
 - used in behavior modification
 - Rewarding subject for giving the intended response; **Operant** or **instrumental conditioning**.
 - Subjects may also be punished for bad or unwanted behavior



BEHAVIORAL APPROACH

- Today - look at more than just observable behavior.
- Focus on thoughts, attitudes, beliefs and behavior
- Called - **Cognitive Behavioral / Social-Cognitive**

COGNITIVE APPROACH

- Study of mental processes in the broadest sense.
- Interest in how humans acquire, process, store, and use information to solve problems.
- They study how cognitive processes are related to behavior
- Scientifically study how people think through observation and experimentation.
- Look at decision making, problem solving, interpersonal attraction, and intelligence.
- Developed in response to behaviorism; has replaced behaviorism in many areas



HUMANISTIC APPROACH

- Not driven by instincts, biology, or rewards and punishment. Believe it is based on each person's **unique perception** of the world.
- Views people as essentially good and in control, and that each person wants to move to their highest potential.
- Focuses on mental health and well-being, self-understanding, and self-improvement.
- Emerged in the 1950's in reaction to behaviorism and psychoanalysis - Today - some find too vague to be tested or expressed scientifically

HUMANISTIC APPROACH

Two most-notable figures

- **Carl Rogers**

- Human nature is intrinsically positive
- Psychological problems are a result to negative societal effects on an individual
- client-centered therapy – therapist provides unconditional positive regard and empathetic understanding for client; replace negative thoughts with positive ones.



- **Abraham Maslow**

- Hierarchy of needs, self-actualization, and peak experiences
- Highest levels of enlightenment or achievement are only reached when basic needs are met (i.e. food, shelter, and safety).

